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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/775,280	02/10/2004	Eugene Christopher Ashby	A01497	1155
7590 Kenneth Crimaldi Rohm and Haas Company 100 West Independence Mall Philadelphia, PA 19106		01/05/2007	EXAMINER LANGEL, WAYNE A	
			ART UNIT 1754	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE		DELIVERY MODE
3 MONTHS		01/05/2007		PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/775,280

Applicant(s)

ASHBY, EUGENE CHRISTOPHER

Examiner

Wayne Langel

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>5-19-04</u> . | 6) <input type="checkbox"/> Other: ____  |

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kolonitsch et al or JP 11-79733 in view of Cox et al or Lindsay et al or Kobetz.

Kolonitsch et al and JP 11-79733 both disclose the production of sodium borohydride by combining a boric acid ester with sodium aluminum hydride. (See claim 1 of the English translation of JP 11-79733, and col. 1, lines 29-48 of Kolonitsch et al.) The difference between the processes disclosed by Kolonitsch et al and JP 11-79733, and that recited in claims 1-5, is that Kolonitsch et al and JP 11-79733 do not disclose that the aluminum trialkoxide which is formed in the reaction should be reacted with sulfuric acid to form the corresponding alcohol and alum. Cox et al, Lindsay et al and Kobetz all disclose that aluminum alkoxides may be reacted with sulfuric acid to form alum and the corresponding alcohol. (See col. 1, lines 45-64 of Lindsay et al, col. 4, lines 33-40 of Cox et al, and col. 1, lines 15-28 of Kobetz.) It would be obvious from Cox et al, Lindsay et al or Kobetz to react the aluminum alkoxide formed according to the process of either Kolonitsch et al or JP 11-79733 with sulfuric acid to produce alum and the corresponding alcohol. One of ordinary skill in the art would be motivated to do so, since one would appreciate that the aluminum alkoxide could be reacted according to any known or conventional reaction.

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Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kolonitsch et al or JP 11-79733 in view of Cox et al or Lindsay et al or Kobetz as applied to claims 1-5 above, and further in view of Filby and Ashby<sup>1524</sup>. It would be further obvious from Filby and Ashby<sup>1524</sup>, respectively, to form the boric acid ester and sodium aluminum hydride necessary for the reaction in the process of either Kolonitsch et al or JP 11-79733, according to the steps recited in (a) and (b) of claim 6. One of ordinary skill in the art would be motivated to do so, since one would appreciate that these reactants could be formed according to any known or conventional reactions.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claims 1 and 6, it is indefinite as to whether the Al(OR) recited in lines 5 and 9, respectively, would necessarily be the same Al(OR) recited in lines 4 and 8, respectively. Claim 2 is indefinite in reciting that ROH formed in step (b) is recycled to step (a), since ROH is not used as a reactant in step (a).

This application apparently discloses allowable subject matter. Claims 9 and 10 are not rejected over the prior art since there is no teaching, disclosure or suggestion in the prior art to carry out the steps recited in claim 6 in the specifically recited order along with recycle of ROH as a reactant for producing the boric acid ester. Nor would there be any motivation (other than through impermissible hindsight) to do so.

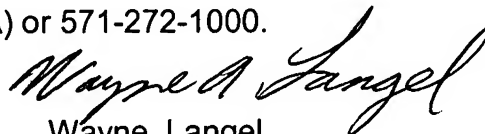
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Amendola et al is made of record for disclosing a method for synthesizing borohydride compounds.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wayne Langel whose telephone number is 571-272-1353. The examiner can normally be reached on Monday through Friday, 8 am - 3:30 pm Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Wayne Langel  
Primary Examiner  
Art Unit 1754